# **Advanced Oxidation**

**Instructor: Tony Goff** 

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Oregon water treatment and distribution Operators can satisfy 2 hours toward license renewal with this course.

Students who take this course will learn about Advanced Oxidation and UV Disinfection and explore topics such as:

- Public health effects of copper and lead contamination Learn about the EPA's Lead and Copper Rule and how high levels of these two contaminants can lead to serious health issues.
- Sample levels Be informed of safe levels of various contaminants caused by corrosion.
- Corrosion control through chemical addition Discover what chemicals may be safely added to a water supply to limit corrosion.
- Cathodic protection Explore how electrical current can be used to neutralize corrosion of metal exposed to water.

# Syllabus:

Advanced Oxidation: 2h 6m

1. Introduction (Video)

- 2m
- a. This video provides history on disinfection procedures and the development of advanced oxidation technology.
- 2. Choosing a Treatment Process & Ozone Disinfection

1h 5m

- a. This section discusses source water issues and how ozonation works.
- 3. Ozone Disinfection (Video)

2m

- a. This video lists the advantages of using ozone to treat drinking water.
- 4. Ultraviolet (Video)

3m

- a. This video discusses ultraviolet light and its uses, including how it compares to other treatment options.
- 5. UV Disinfection 50m
  - a. This section examines the history of UV disinfection, how UV disinfection works, and UV reactor designs.

6. Conclusion (Video)

4m

a. This video reviews the course topics and purpose, as well as water quality concerns with groundwater sources.

### **Course Details:**

### Requirements:

Our system is offered online and so there are a few requirements in order to complete the course. Our course can be taken with a minimal system that meets all of the requirements below, but the learning experience will be best if the student's system meets the following recommendations as well.

**Required:** Internet capable device. Our course is compatible with smartphones, tablets, and traditional computers. It is not necessary that students own this device, merely that they have access to such a device.

**Required:** Internet connection.

**Recommended:** High speed internet connection. Our course uses a number of videos and therefore the experience will be better with a high speed connection.

Required: Up to date browser.

**Recommended:** Up to date version of Google Chrome.

# **Course Setup:**

Course completion is tracked through questions between the sections. The questions within slides do not, however, track progress. In order to mark the course as complete, students will need to answer all of the questions attached to the course.

Upon enrolling in our course, students will have access for 365 days. After this 365 day period, they may contact us to have their enrollment renewed.

Any questions, concerns, or issues that arise while taking the class can be addressed by calling the contact number, writing to the contact email, or sending a message through the "Suggestion Box" included in the course. Any message will receive a response within one business day, though chats are usually answered within one hour.

After finishing all course content, the student will need to fill out the "Completion Questionnaire" so that their completion can be reported to the state.

# **Course Completion:**

Upon successful completion of the course, the student will be able to complete the

"Mandatory Questionnaire" which gives us the necessary information to report completion to the state. The student will then have access to the certificate of completion. If applicable, AYPO will report completion to the state.

#### Refunds:

All tuition and fees paid by the applicant shall be refunded if the applicant is rejected by the school before enrollment. All tuition and fees paid by the applicant shall be refunded if requested within three business days after the terms and conditions have been accepted (on the enrollment page). Refunds are returned within thirty business days.

After the initial three business days have elapsed, AYPO will happily refund 100% of the purchase price for any course which the student has not yet begun.

Refunds of all or some portion of the purchase price may be available in situations where the student has already started taking the course, but not yet completed it. In general, for individuals who have already completed an entire course, refunds will not be available. Our office staff may be reached at (877) 724-6150 for more information about refund requests.

#### Attendance and Dismissal:

Students who enroll in this class are required to complete 100% of the course to receive credit. Since this class is presented online, enrolled students are not dismissed.

#### **Course Content:**

At Your Pace Online is responsible for the content of this course.